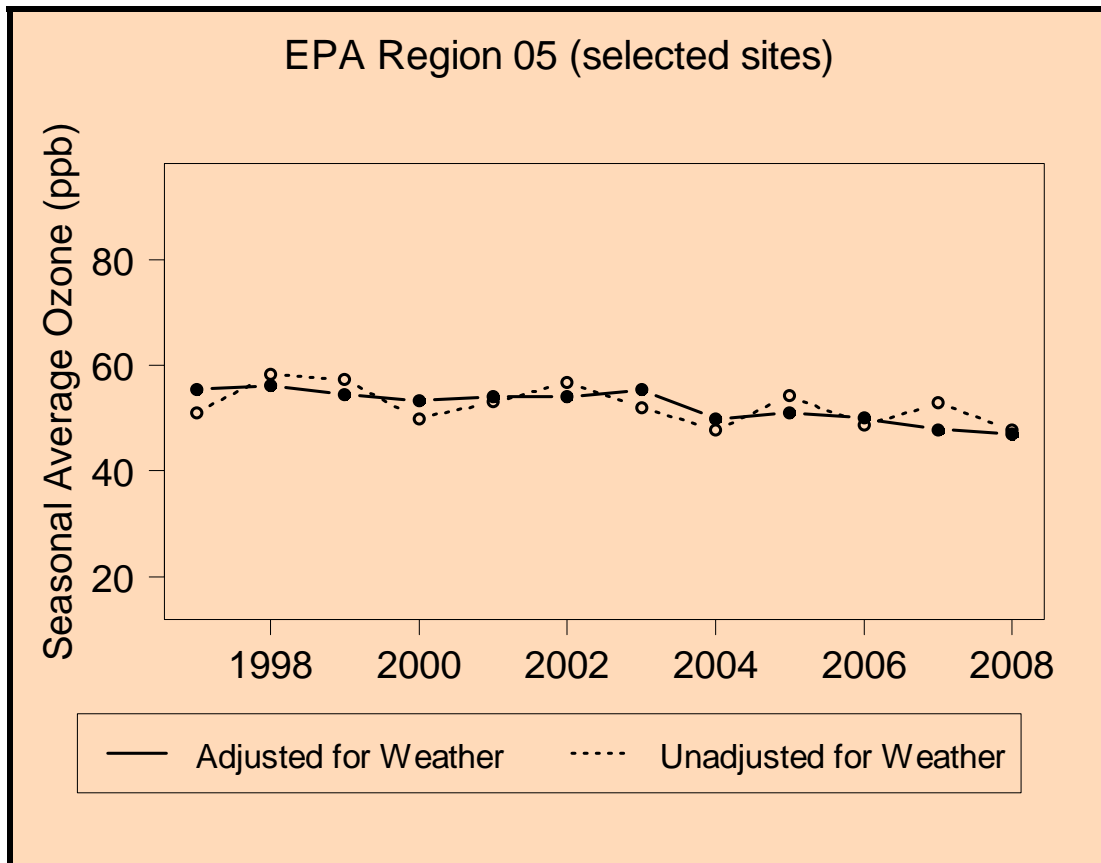


# Weather Makes a Difference: 8-hour Ozone Trends for 1997-2008

State and Local Information for EPA Region 5

Illinois  
Indiana  
Michigan  
Minnesota  
Ohio  
Wisconsin

Composite trend for available areas in the above states:



U.S. Environmental Protection Agency  
Office of Air and Radiation  
Office of Air Quality Planning and Standards

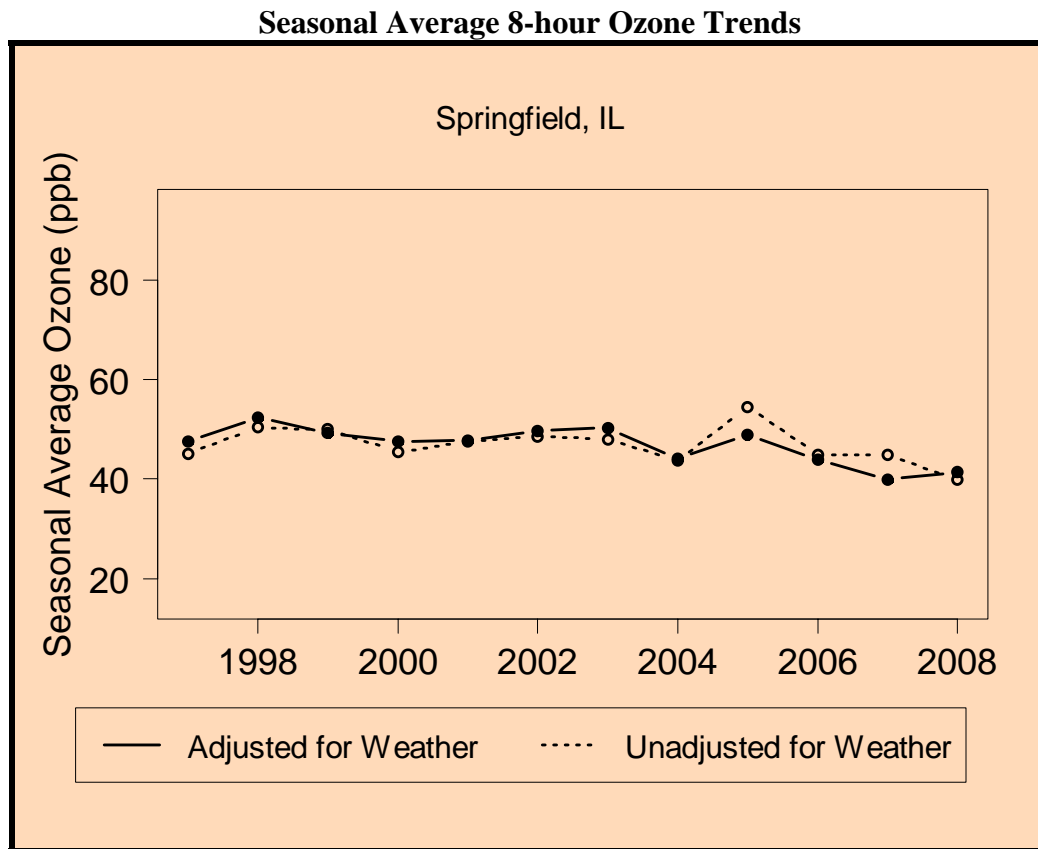
August 2009

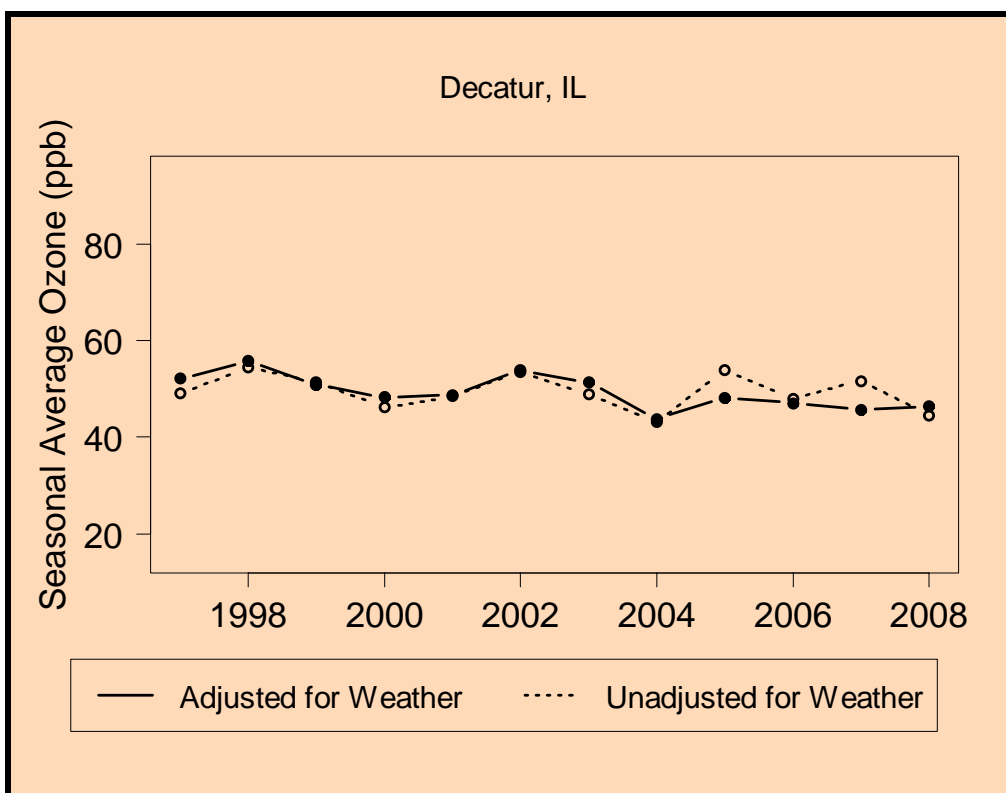
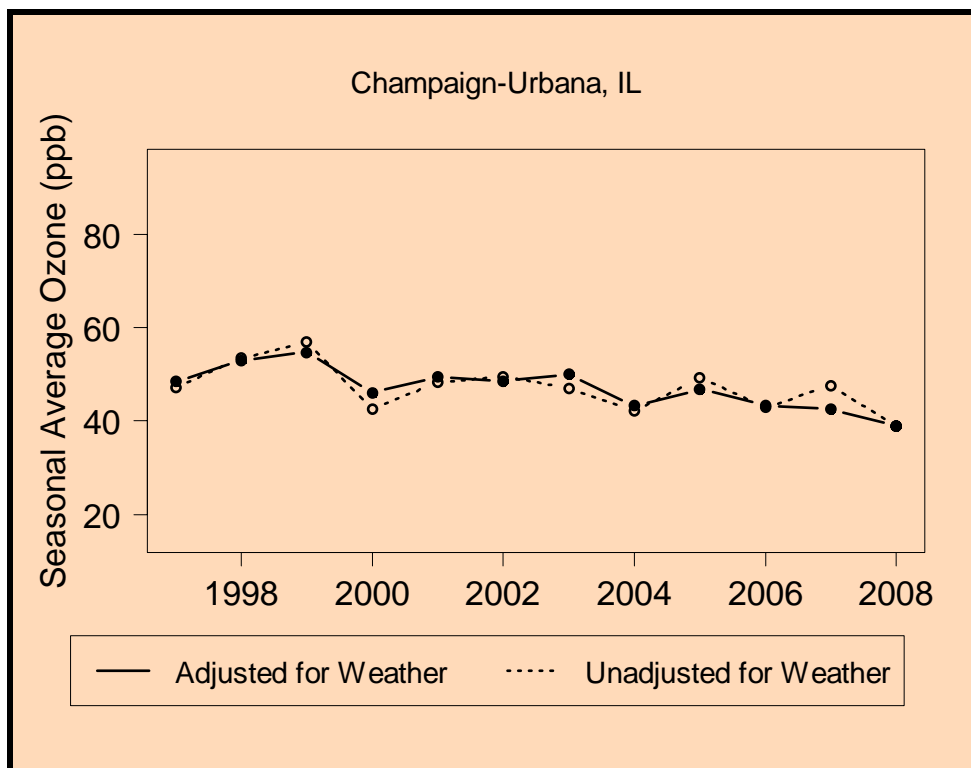
## Illinois

### Ozone

In Illinois, ozone adjusted for weather conditions declined 14 percent between 1997 and 2008. The level of ozone improvement varies from site to site.

Trends for 1997-2008 for areas with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.





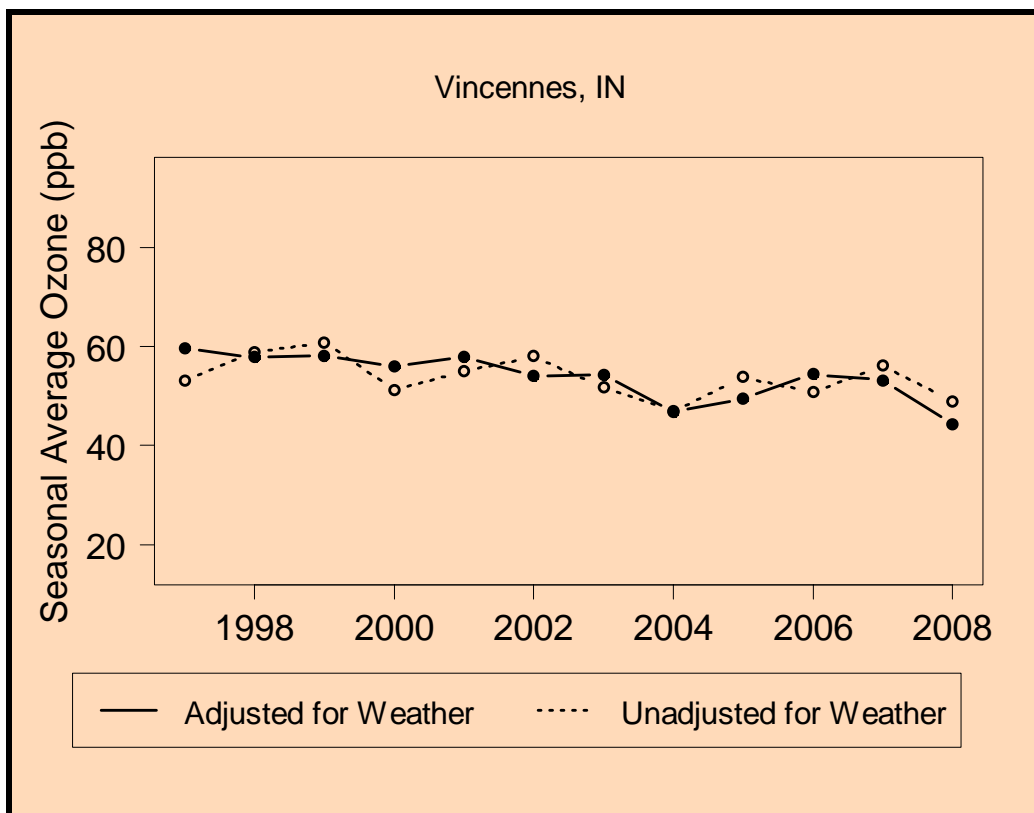
## Indiana

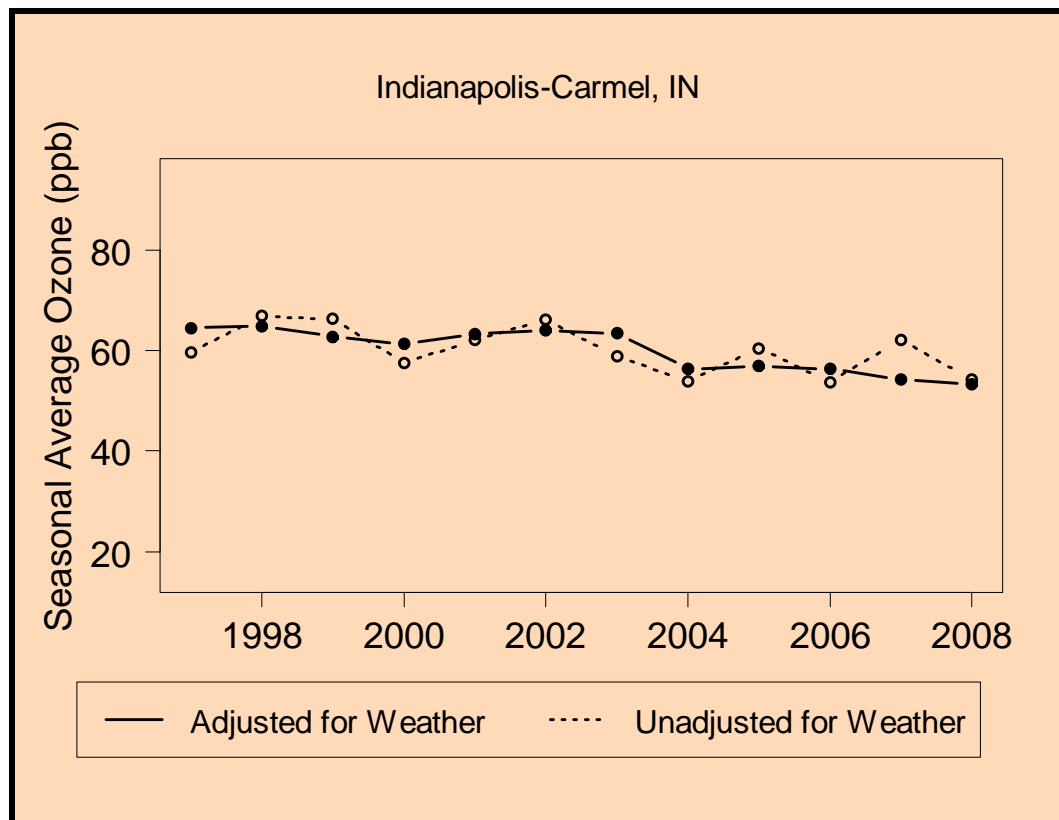
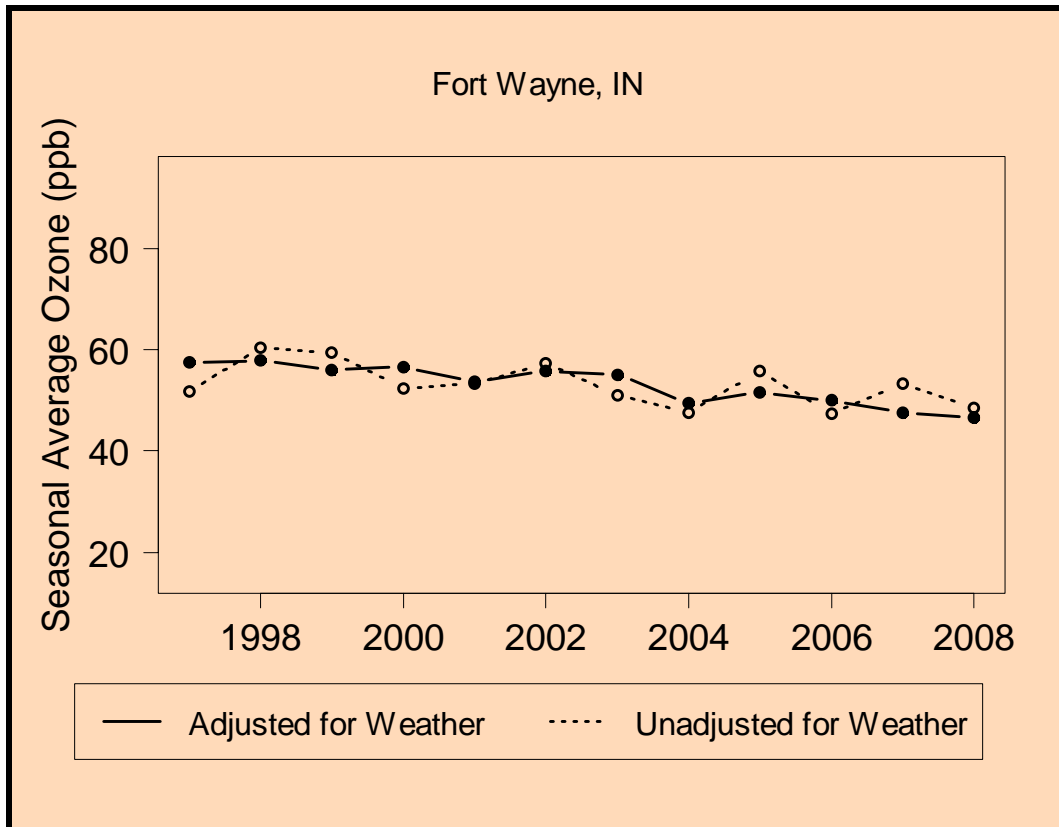
### Ozone

On average, ozone adjusted for weather conditions declined 21 percent between 1997 and 2008. The level of ozone improvement varies from site to site.

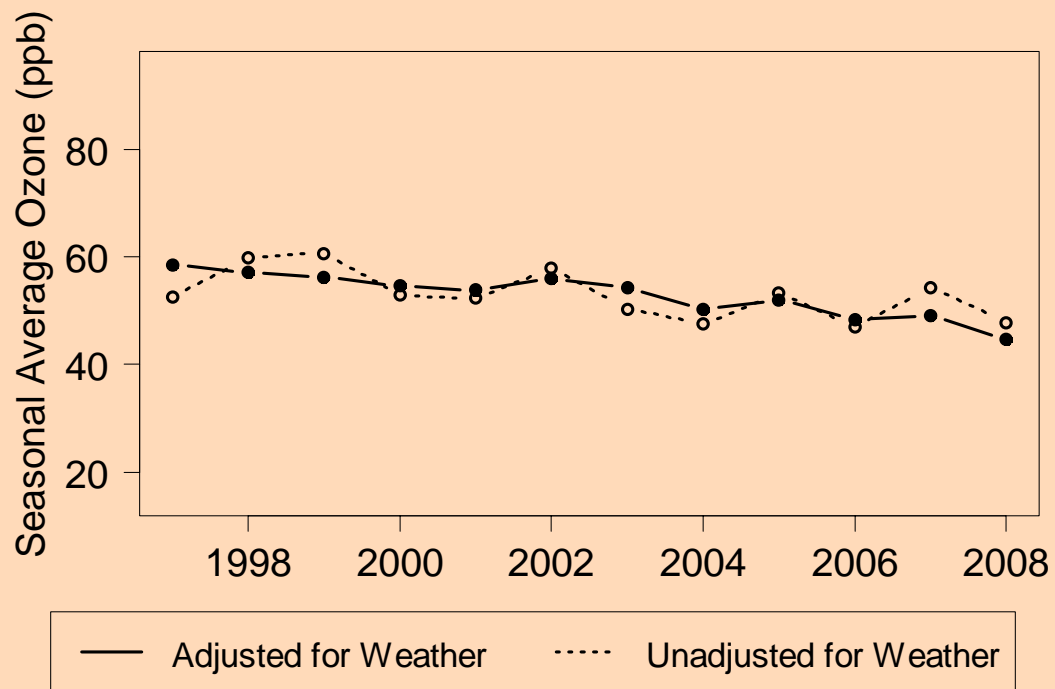
Trends for 1997-2008 for areas with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.

#### Seasonal Average 8-hour Ozone Trends





# Salamonie Reservoir, IN

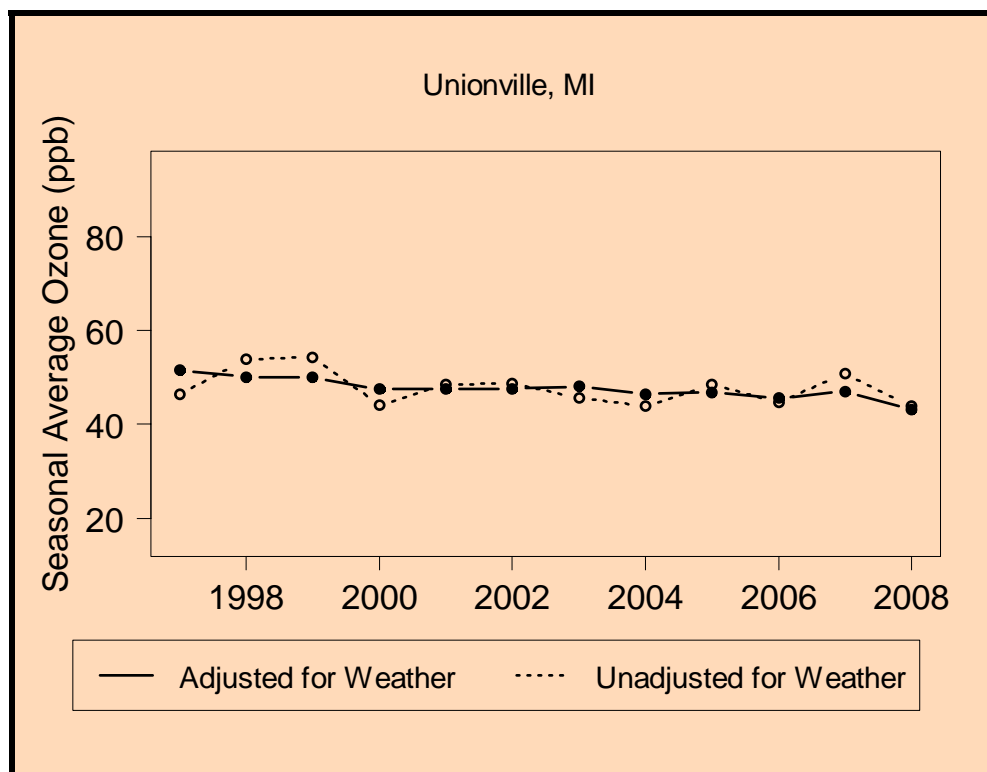


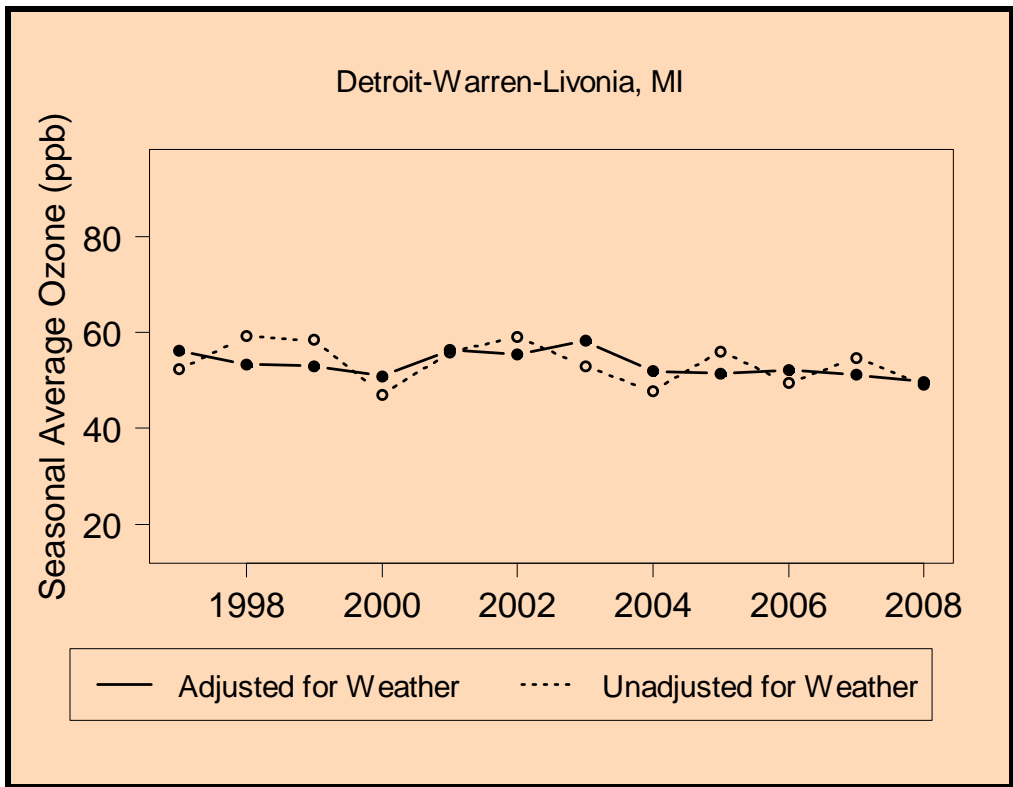
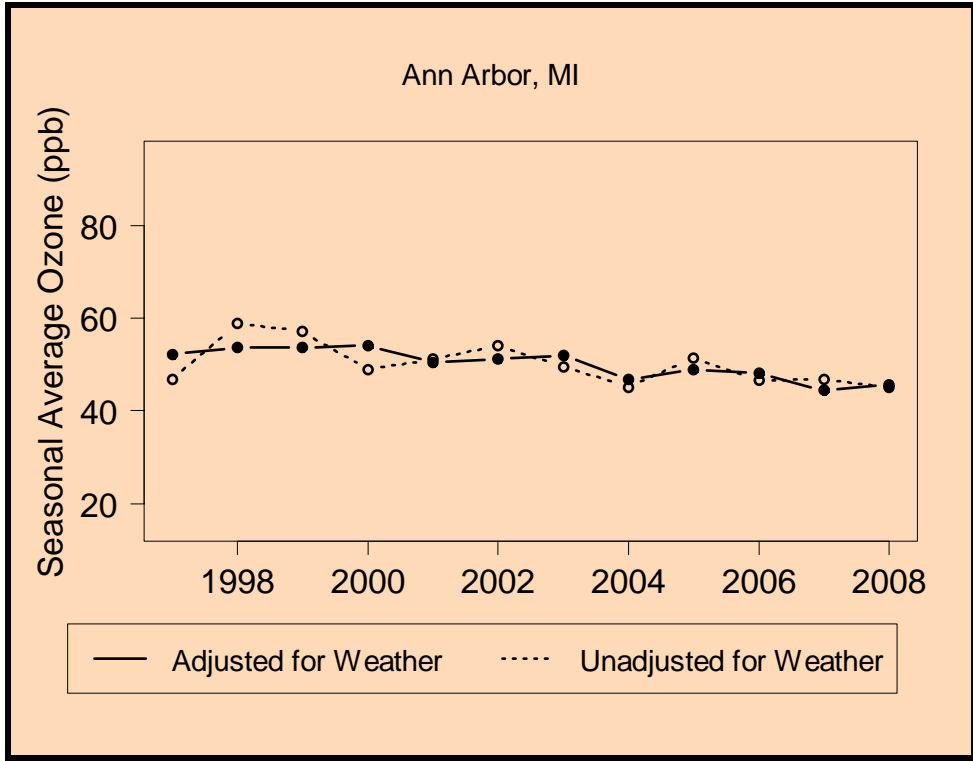
## Michigan Ozone

On average, ozone adjusted for weather conditions declined 14 percent between 1997 and 2008. The level of ozone improvement varies from site to site.

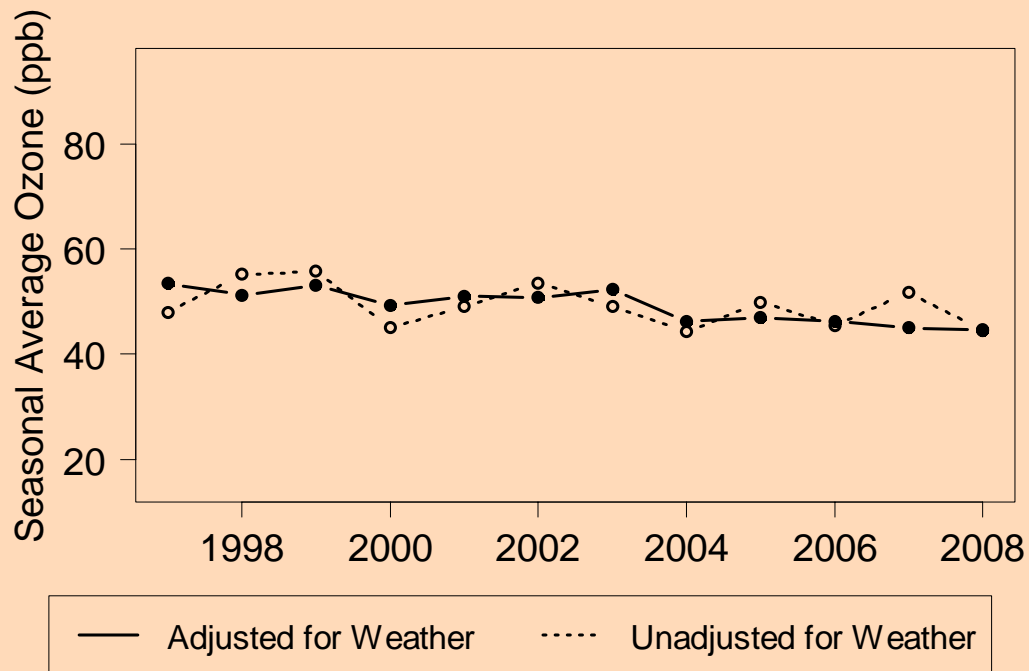
Trends for 1997-2008 for areas with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.

**Seasonal Average 8-hour Ozone Trends**





# Grand Rapids-Wyoming, MI



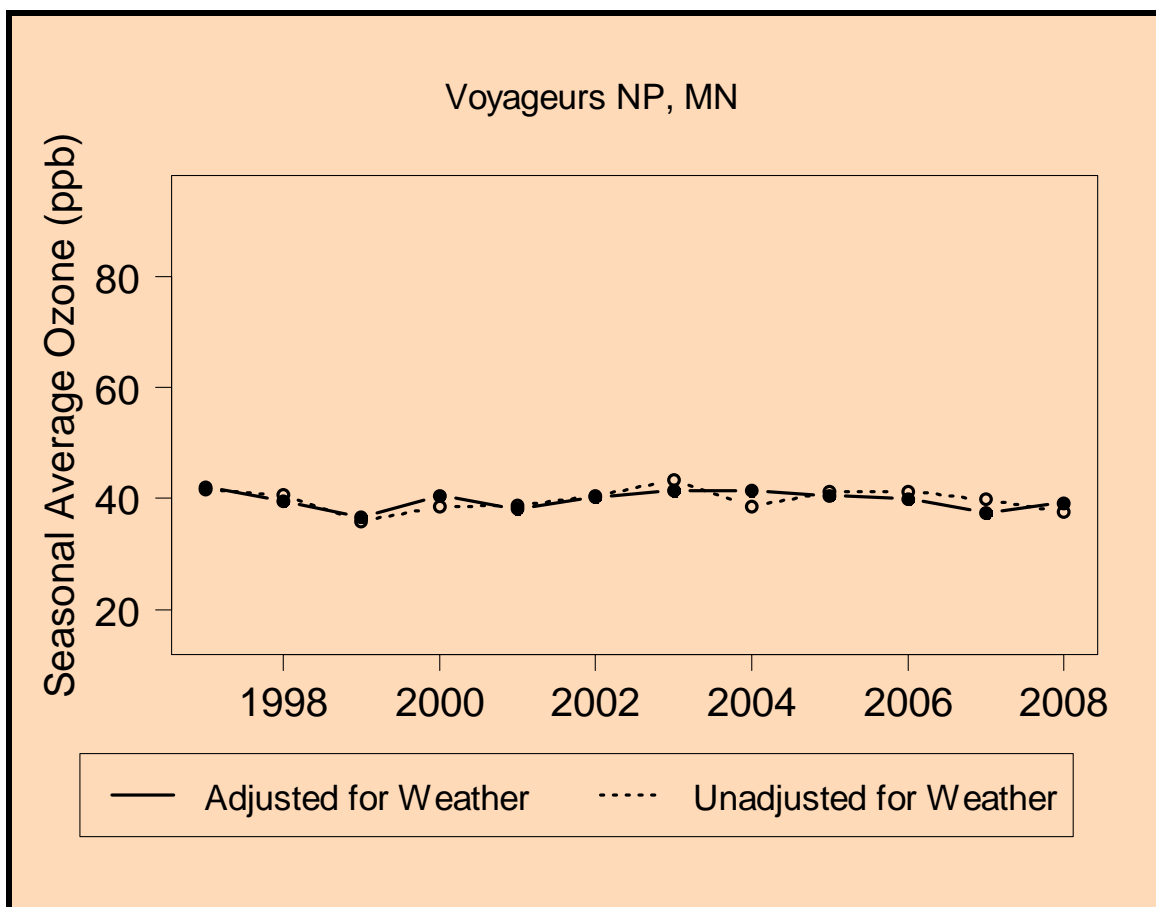
## Minnesota

### Ozone

In Voyageurs National Park, ozone adjusted for weather conditions declined 7 percent between 1997 and 2008.

Trends for 1997-2008 for a site in Voyageurs National Park with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.

#### Seasonal Average 8-hour Ozone Trends



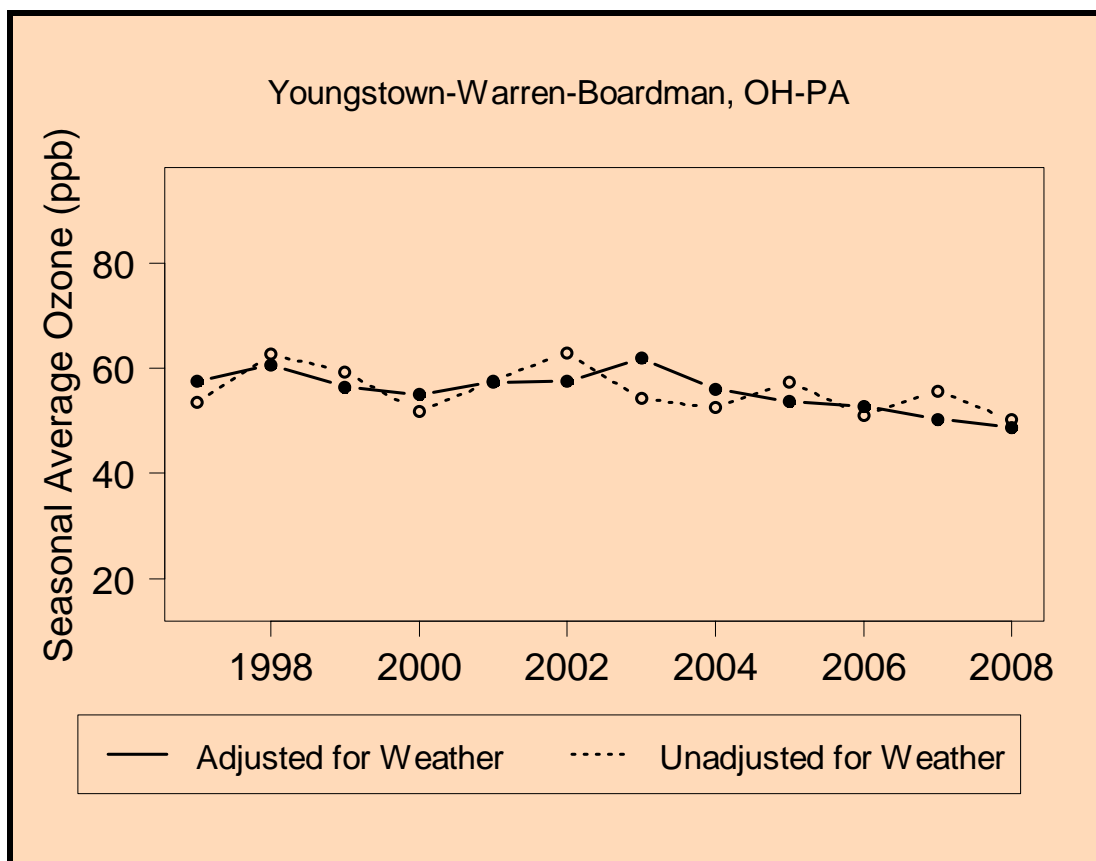
## Ohio

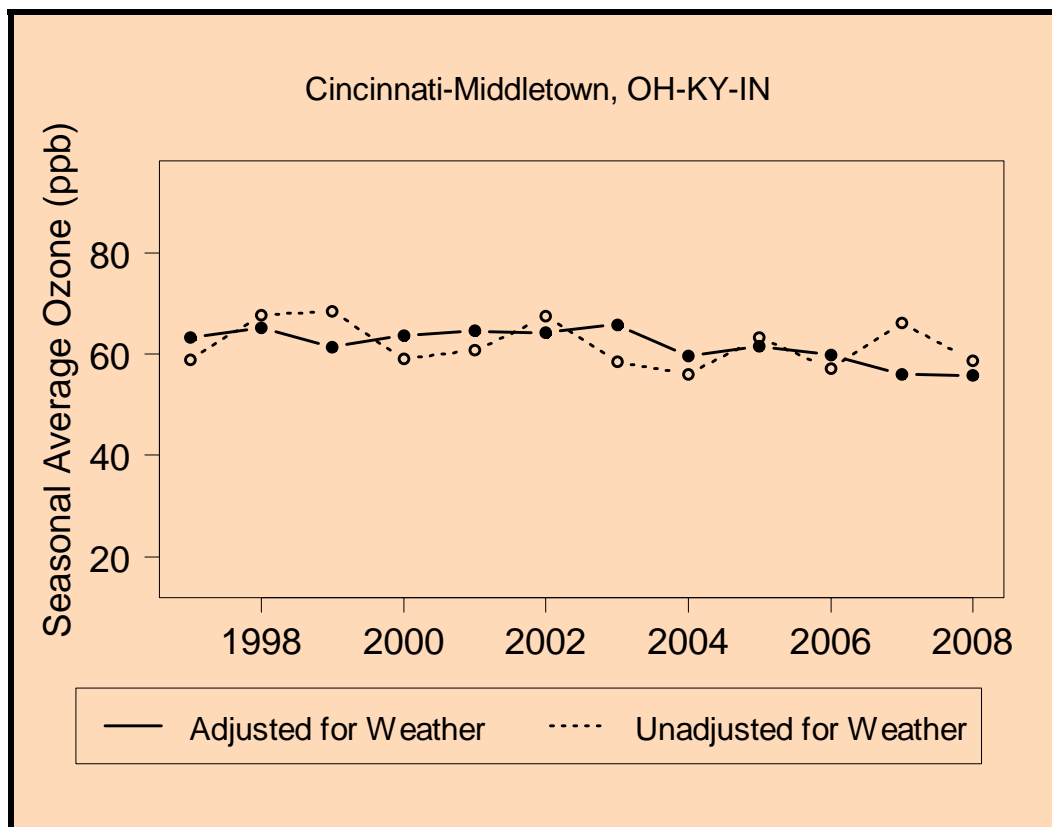
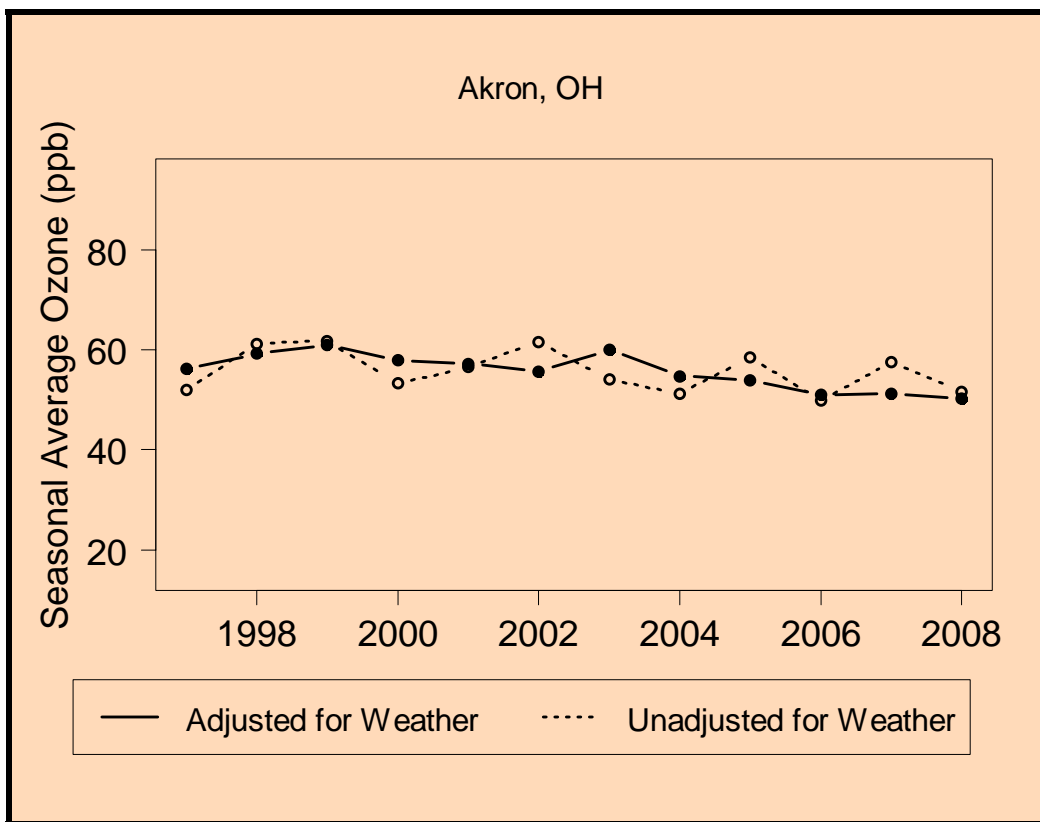
### Ozone

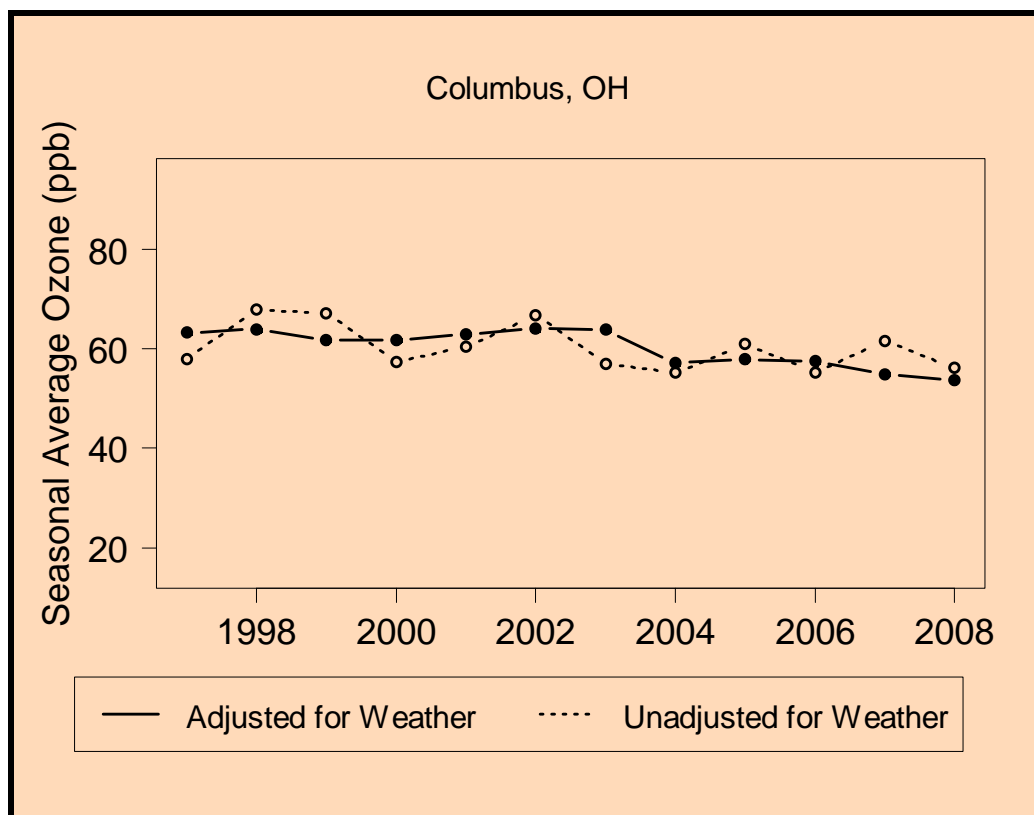
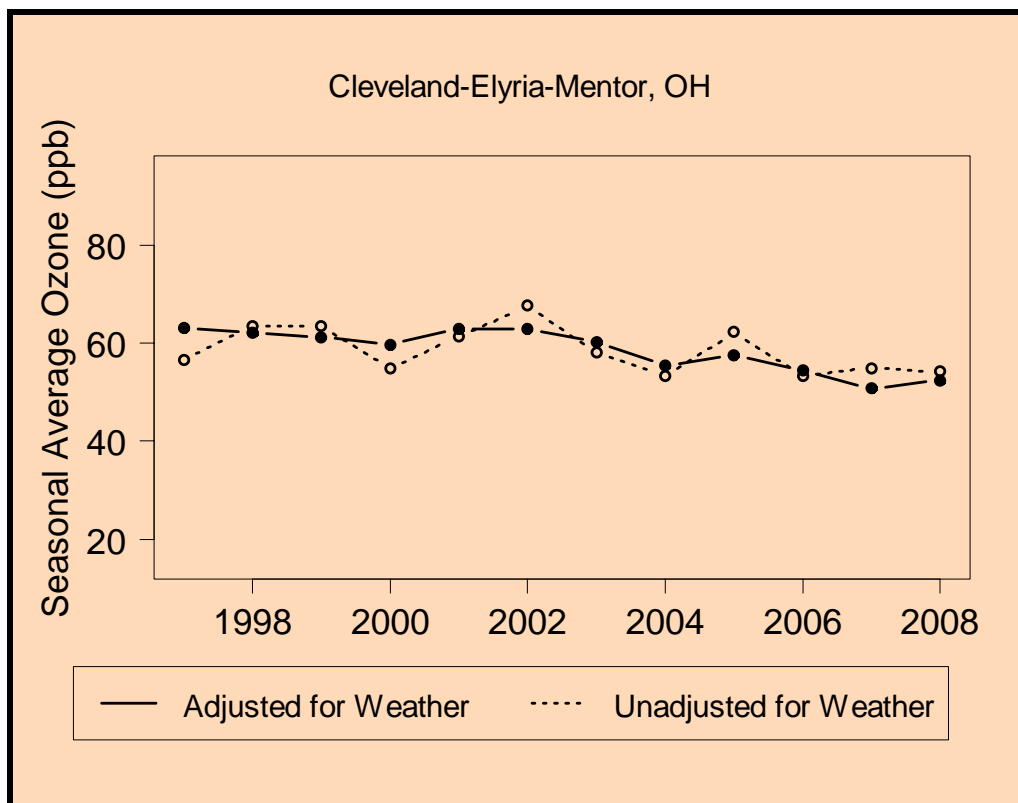
On average, ozone adjusted for weather conditions declined 15 percent between 1997 and 2008. The level of ozone improvement varies from site to site.

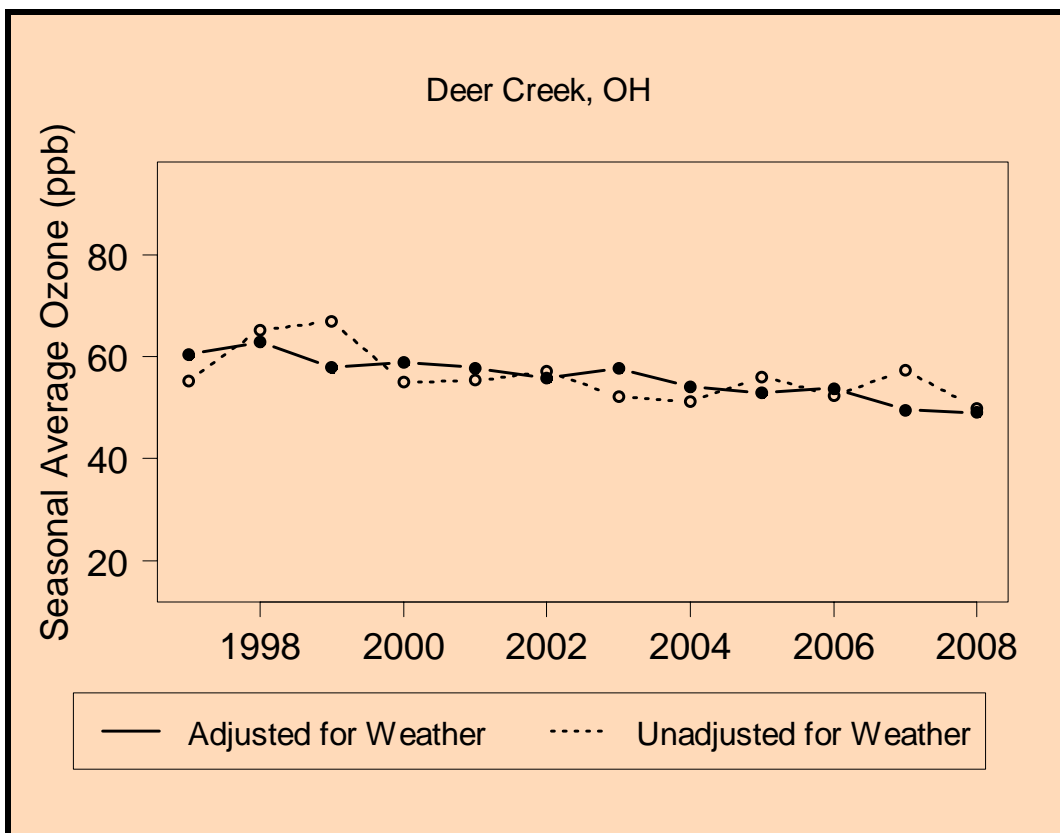
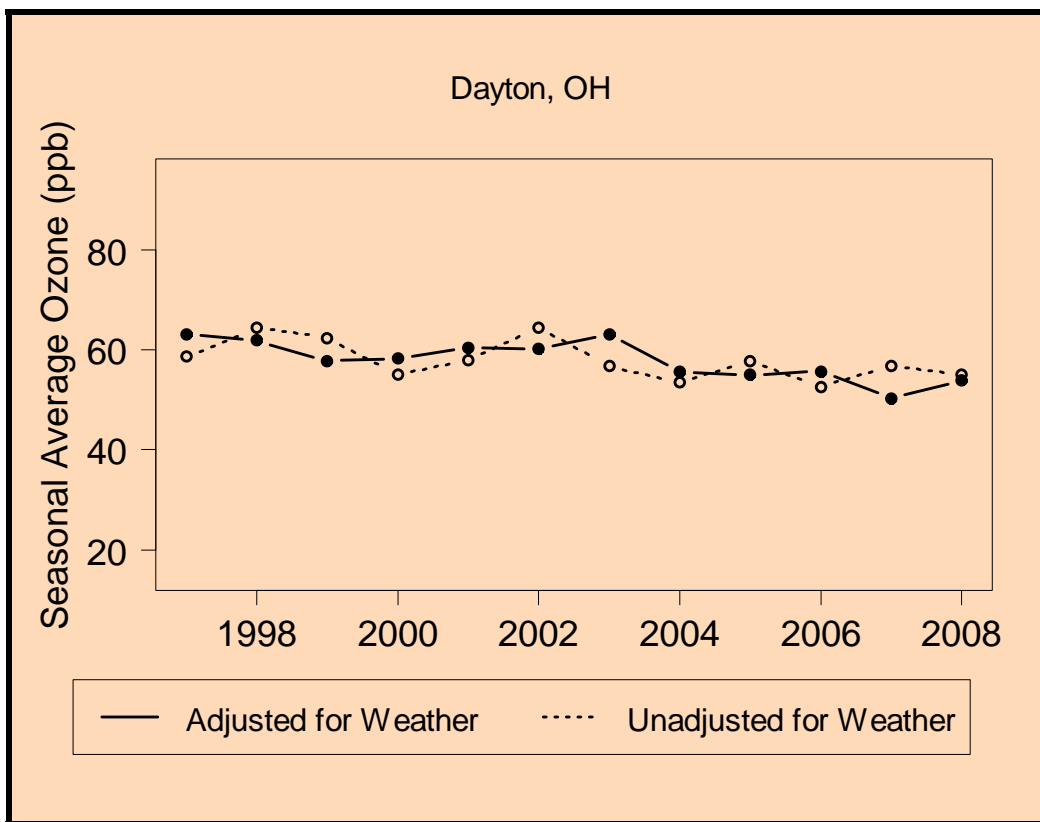
Trends for 1997-2008 for areas with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.

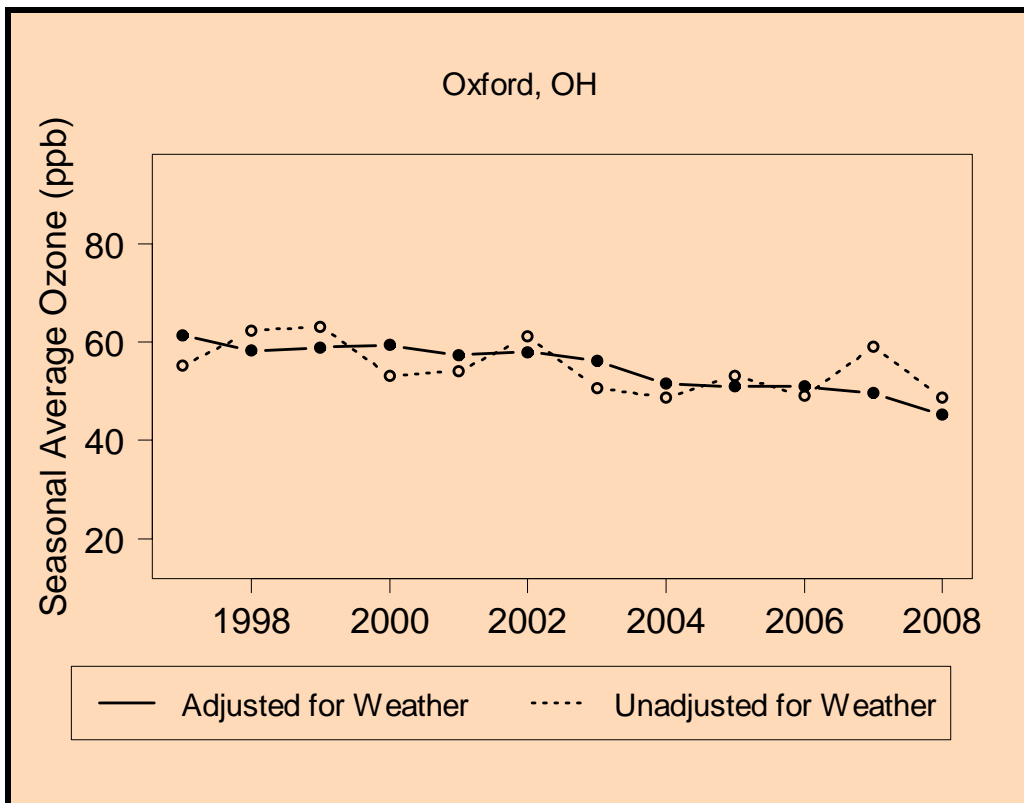
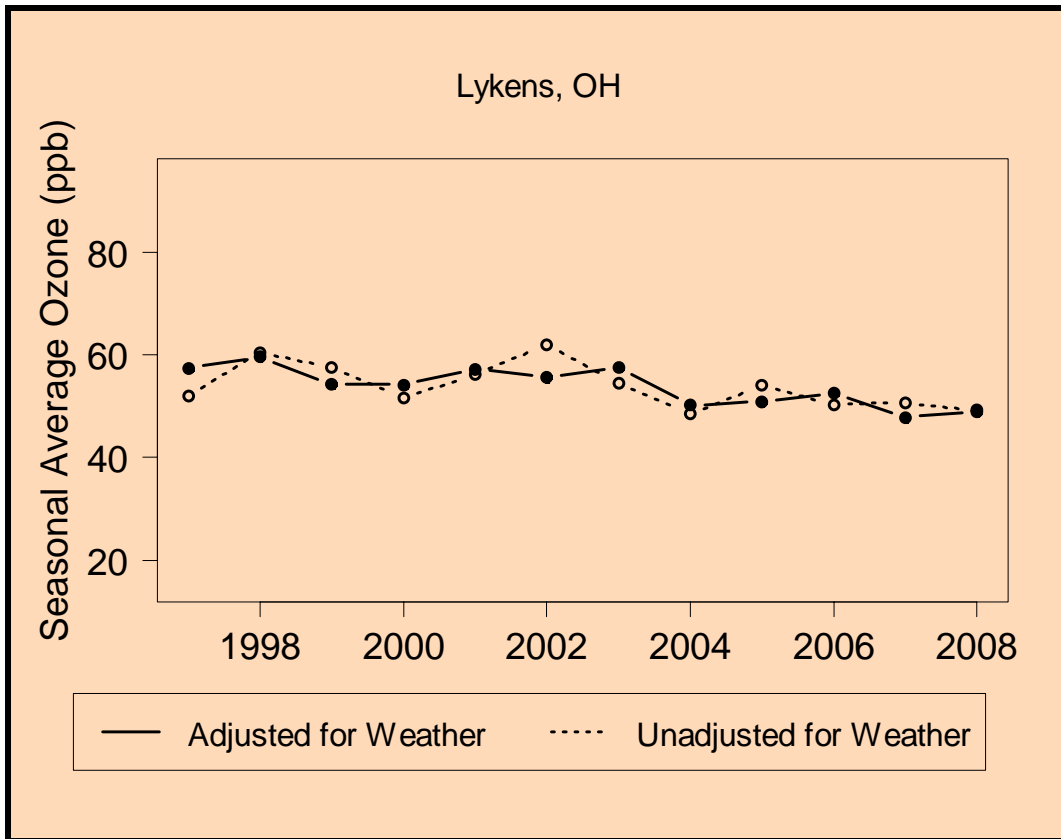
#### Seasonal Average 8-hour Ozone Trends



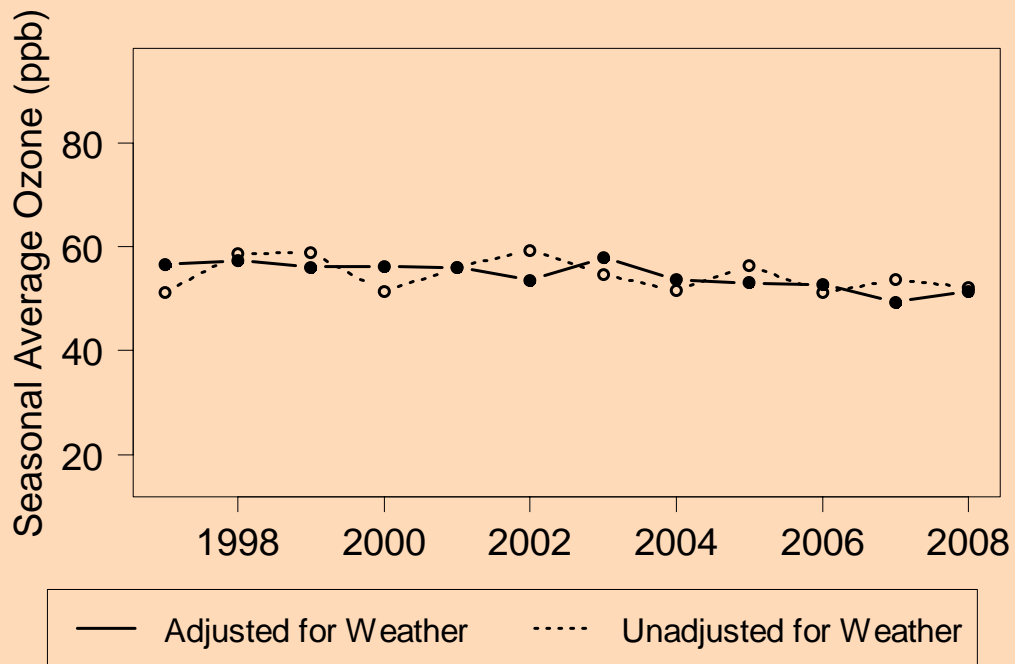








# Toledo, OH



## Wisconsin

### Ozone

On average, ozone adjusted for weather conditions declined 12 percent between 1997 and 2008. The level of ozone improvement varies from site to site.

Trends for 1997-2008 for areas with complete ozone and meteorology data are presented below. Ozone season (May 1 - September 30) averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in weather conditions. The dotted line shows the trend in observed values at monitoring sites, while the solid line illustrates the underlying ozone trend after removing the effects of weather. The solid line serves as a more accurate ozone trend for assessing changes in emissions. Typical weather conditions are determined by averaging conditions (e.g., temperature, humidity, etc.) for the time period presented. The information provided is useful for reviewing the weather influence for a particular ozone season. The solid line represents ozone levels anticipated under typical weather conditions.

#### Seasonal Average 8-hour Ozone Trends

